

# COVID-19 data sources and their challenges for modelling and estimation

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## **Abstract**

Early in the pandemic we used a dynamical compartmental model with Bayesian estimation to quantify the strength of distancing measures in a number of jurisdictions. Along the way we noted that BC had not seen a “first wave” despite much language to the contrary, that the data allowed estimation of the strength of distancing but left the prevalence and  $R_0$  values largely un-identifiable, and that if BC reopened to pre-pandemic levels of social contact, a large resurgence could be expected.

As with many other jurisdictions, despite lack of immunity, no highly effective treatment and armed with the knowledge that COVID-19 had not been eliminated from our shores, BC proceeded to reopen throughout the summer and reopened schools in September 2020. We discuss how the Bayesian model is currently being used for Canadian projections, and other questions in modelling that have arisen through collaboration and conversation with the British Columbia Centre for Disease Control. Examples include school clusters and the limitations of contact tracing for COVID-19. We conclude with some time for discussion.